

## CLAIMS

What is claimed is:

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1. A permanent magnet excited rotor, for an electric drive, comprising:  
a rotor plate pack; and  
a plurality of permanent magnets;  
wherein at least one rotor plate section of said plate pack comprises  
pole gaps to increase the magnetic transverse resistance for the  
transverse axis of said rotor.
  2. The permanent magnet excited rotor of claim 1, wherein:  
said plurality of permanent magnets of said rotor is disposed on the  
upper surface of a pertaining rotor plate in such a way that said  
plurality of permanent magnets, during assembly said rotor, are  
arranged in a stator at the corresponding air gap between said rotor  
and said stator.
  3. The permanent magnetic excited rotor of claim 2, wherein:  
said pole gaps are disposed such a manner that there is present a  
pole coverage of the upper surface of said rotor plate by said plurality  
of permanent magnets, with a coverage by said plurality of permanent  
magnets in the range of from about 70% to about 80 %.

4. The permanent magnet excited rotor of claim 3, wherein:  
the pertaining depth of said pole gaps in said rotor plate is greater  
than the pertaining width of said air gap between said rotor, mounted  
in said stator, and said stator

5. The permanent magnet excited rotor of claim 4, wherein:  
said pole gaps are disposed in said rotor plate pack in substantially  
equidistant manner.

6. The permanent magnet excited rotor of claim 5, wherein:  
said pole gaps are directly disposed at said air gap, particularly that  
they are configured in the upper surface of said rotor plate pack by at  
least one of: milling, stamping, and punching.

7. The permanent magnet excited rotor of claim 6, wherein:  
said pole gaps are disposed in covered manner in said rotor plate  
section, particularly that they are provided in said rotor plate pack by a  
punching operation.

8. The permanent magnet excited rotor of claim 7, wherein:  
said pole gaps are substantially filled by a material that is substantially  
amagnetic.

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9. The permanent magnet excited rotor of claim 8, wherein:  
said plurality of permanent magnets comprises rare-earth permanent magnets.
10. A permanent magnet excited electric drive, comprising:  
a stator comprising a three-wire rotary field winding of a predetermined number of pole pairs ; and  
said rotor of claim 1;  
said rotor comprising the same number of pole pairs as said stator comprising a three-wire rotary field winding of a predetermined number of pole pairs.
11. The permanent magnet excited electric drive of claim 9, wherein:  
said drive is configured to be driven in a range of constant capacity by way of field weakening at variable number of rotations.

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